REMARKS

Claim Amendments

After entry of this amendment, claims 1-19 and 21-38 will be pending. Claim 20 is cancelled, claims 30-38 are newly added and claims 24-27 are amended to correct an obvious typographical error. The amendments are made without prejudice to resubmitting the claims in a subsequent application. Support is found for example at page 19, lines 16-26 and table 1, row 2 (EC 1.4.3.3). No new matter has been added.

Provisional Election

In response to the restriction requirement set forth in the Office Action mailed July 21, 2005, Applicants hereby provisionally elect Group I, claims 1-12 and 20-25 and the nucleic acid sequence encoding a D-amino acid oxidase (EC 1.4.3.3 at row 2 in Table 1) which corresponds to the protein sequence of GenBank Accession No.: P80324, with traverse. Applicants strongly urge reconsideration of the restriction requirement for the following reasons.

The Claimed Inventions Share a Special Technical Feature

Because this application is a national stage filing pursuant to 35 U.S.C. § 371, unity of invention under PCT Rule 13.1 and 13.2 is the applicable standard. Unity of invention is fulfilled "only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical feature. The expression 'special technical feature' shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art." (PCT Rule 13.2).

The Examiner has characterized the invention listed as Groups I-IV as sharing the technical feature of utilizing or being involved in the metabolism of D-amino acids and stated that this lacks novelty and does not make a contribution over the prior art, citing to Lehninger. Applicants agree that the enzymes are not novel, however, respectfully but strenuously disagree with the characterization that the invention does not make a contribution over the prior art. The common feature of the invention is the use in plants of D-amino acid metabolizing enzymes. Plants lack such enzymes and "no endogenous D-amino acid metabolizing activity has been reported in plants" (Specification page 4, lines 20-21).

The prior art cited by the Examiner describes D-amino acids as functioning "in the structure of bacterial cell walls" and amino acid racemases as being "uniquely important to bacterial metabolism" and is completely silent regarding plants. The contribution of Applicants' invention over the prior art is the expression and use of such enzymes in plants. For example, as recited in the specification, "plants lack the necessary enzymes to convert D-amino acids into nitrogen forms that can be used in synthetic reactions inside the plant. Plants cannot therefore use D-amino acids as a source of nitrogen." (Specification page 2, lines 11-14). Moreover, Applicants "have discovered that plants which express a heterologous gene encoding an enzyme that metabolises a D-amino acid are able to utilize that D-amino acid as a nitrogen source and grow on media which would not otherwise support growth of the wild-type plant." (Specification page 2, lines 24-28).

Further, claim 1 requires that the nucleic acid be "operably linked to a heterologous plant specific regulatory element." Therefore the "single general inventive concept" of the present invention as claimed as required under PCT Rule 13 relates to the expression and use of such

enzymes in plants. Since the prior art cited by the Examiner refers to the existence of D-amino acids in bacteria and is silent regarding plants, this reference is inapplicable as a basis for destroying unity of invention.

Restriction to Only Claims Reciting One Enzyme Sequence is Inappropriate Where the Enzymes are Admittedly Well Known.

The Examiner has further required the Applicants to select one nucleotide sequence encoding one amino acid sequence from Table 1 or Table 2 of the specification. Applicants strongly disagree with this requirement and request reconsideration and withdrawal.

The novelty of Applicants' invention is not in the sequence of particular enzymes. As stated above the sequences of the enzymes are known. The novelty of the invention rather is in the expression and use in plants of D-amino acid metabolizing enzymes. In Applicants' novel combinations and methods, any enzyme having the recited function can be used. Applicants are not trying to patent the enzymes themselves, but rather a method of using them in plants.

To limit the present application to claims directed to use of only one enzyme would unduly restrict the application to one very narrow invention and require an undue multiplicity of applications to be filed to cover use of other enzymes. Applicants do not believe that searching the sequences of the enzymes is required to examine this application, but only searching for the function is needed. Such a search and examination need not be limited to one specific nucleic acid sequence encoding one enzyme.

The International Examiner Found Unity of Invention

Furthermore, the International Examination Authority, as shown in the International Preliminary Examination Report, has not found a lack of unity of invention for the present invention when applying PCT Rules 13.1 and 13.2.

Additionally, Applicants believe that there is no undue burden on the Examiner to search and examine all groups. As previously noted, this is a 371 application from a PCT application, and all the groups were searched by the International Search Authority and the International Examination Authority. Applicants respectfully submit that the restriction requirement should be withdrawn even under restriction practice. As stated in § 803 of the M.P.E.P. "[i]f the search and examination of the entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions." (M.P.E.P. § 803, emphasis added). Since the search has already been conducted by the International Search Authority and the International Examination Authority and no lack of unity of invention has been found, there would be no undue burden on the Examiner to examine the entire application.

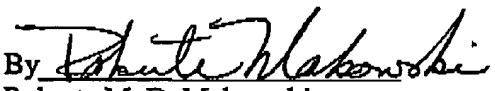
Conclusion

For the above reasons, Applicants respectfully request that the restriction requirement be reconsidered and withdrawn.

This response is accompanied by a Petition for a one-month Extension of Time and a fee sheet authorizing payment of the extension fee and additional claim fees. If any additional fee is

due, the Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 12810-00139-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 

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